March 11, 2003

Steven Supinger
American Granite
123 North Main Street
Piqua, Ohio 46201

Dear Mr. Supinger:

Re: Registered Construction and Operation Status,
097-16651-00441

The application from American Granite, received on October 10, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.5, it has been determined that the following operation of lettering of cemetery memorials, to be located at 3502 East New York Street, Indianapolis, Indiana 46201, is classified as registered:

(a) Two (2) enclosed ABC/Empire blasters, with a maximum capacity of three (3) pounds of sinterball media per hour (lbs/hr), using a water trap particulate control device.

(b) One (1) enclosed Frost Boot/Empire blaster, with a maximum capacity of three (3) pounds of starblast media per hour.

The following conditions shall be applicable:

(a) Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plan), any person responsible for operating any facility required to obtain a Permit shall prepare and maintain a Preventive Maintenance Plan which includes the following:

(1) Identification of responsible individuals for inspecting, maintaining and repairing emission control devices.

(2) Description of items and conditions that will be inspected and an inspection schedule.

(3) Identification of replacement parts in inventory for quick replacement.

The Preventive Maintenance Plan shall be submitted upon request and subject to review and approval by OES.

(b) Pursuant to 326 IAC 2-6 (Emission Reporting), the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

(c) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(d) Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the rate of emission of particulate from blasting operations shall not exceed five hundred fifty-one thousandths (0.551) pounds per hour.

This registration is the first air approval issued to this source.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.5-4(a)(3). The annual notice shall be submitted to:

Compliance Data Section
Office of Air Quality
100 North Senate Avenue
P.O. Box 6015
Indianapolis, IN 46206-6015
and
Office of Environmental Services
Air Quality Management Section, Compliance Data Group
2700 South Belmont Avenue
Indianapolis, Indiana 46221-2097

no later than March 1 of each year, with the annual notice being submitted in the format attached.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original Signed by John B. Chavez
John B. Chavez, Administrator

aco

cc: File
Air Compliance, Matt Mosier
IDEM, Mindy Hahn
Permits, Angelique Oliger

Registration
Annual Notification

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3).

Company Name:	**American Granite**
Address:	**3502 East New York Street**
City:	**Indianapolis, Indiana 46201**
Authorized individual:	**Steven Supinger**
Phone #:	**(938) 773-2000**
Registration #:	**097-16651-00441**

I hereby certify that American Granite is still in operation and is in compliance with the requirements of Registration 097-16651-00441.

Name (typed):
Title:
Signature:
Date:

Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	American Granite
Source Location:	3502 East New York Street, Indianapolis, Indiana 46201
County:	Marion
SIC Code:	5999
Operation Permit No.:	097-16651-00441
Permit Reviewer:	Angelique Oliger

The Office of Environmental Services (OES) has reviewed an application from American Granite relating to the construction and operation of lettering cemetery memorials.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

(a) Two (2) enclosed ABC/Empire blasters, with a maximum capacity of three (3) pounds of sinterball media per hour (lbs/hr), using a water trap particulate control device.

(b) One (1) enclosed Frost Boot/Empire blaster, with a maximum capacity of three (3) pounds of starblast media per hour, using no control.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Administrator that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 10, 2002.

Emission Calculations

See Appendix A (one page) of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	13.05
PM-10	13.05
SO_2	negligible
VOC	negligible
CO	negligible
NO_x	negligible
HAPs	negligible

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of particulate is equal to or greater than five (5) tons per year and equal to or less than twenty-five (25) tons per year. The potential to emit (as defined in 326 IAC 2-7-1(29)) of all other criteria pollutants is less than twenty-five (25) tons per year. Therefore, the source is registered and subject to the provisions of 326 IAC 2-5.5.

(b) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Actual Emissions

No previous emission data has been received from the source.

County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO_2	maintenance attainment
NO_2	attainment
Ozone	maintenance attainment
CO	attainment
Lead	unclassifiable

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Marion County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(c) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	13.05
PM10	13.05
SO_2	negligible
VOC	negligible
CO	negligible
NO_x	negligible
Single HAP	negligible
Combination HAPs	negligible

(a) This new source is not a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)

This source is subject to 326 IAC 1-6-3 because it is required to obtain a Permit. Any person responsible for operating any facility required to obtain a Permit shall prepare and maintain a Preventive Maintenance Plan which includes the following:

(a) Identification of responsible individuals for inspecting, maintaining and repairing emission control devices.

(b) Description of items and conditions that will be inspected and an inspection schedule.

(c) Identification of replacement parts in inventory for quick replacement.

The Preventive Maintenance Plan shall be submitted upon request and subject to review and approval by OES.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1, because it is not a major source of hazardous air pollutants, as defined in 40 CFR 63.

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than ten (10) tons per year of particulate and is located in Marion County. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by April 15 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-1 (Nonattainment Area Limitations)

This rule does not apply to this source because the potential to emit of particulate is less than one hundred (100) tons per year and it is not a specifically listed source in 326 IAC 6.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2(e)(2), when the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission of particulate is five hundred fifty-one thousandths (0.551) pounds per hour. The process weight rate of the blasting operations is less than one hundred (100) pounds per hour. Therefore, the rate of emission of particulate shall not exceed five hundred fifty-one thousandths (0.551) pounds per hour.

326 IAC 7-1 (Sulfur Dioxide Emission Limitations)

This rule does not apply to this source because the potential to emit is less than 25 tons per year or 10 pounds per hour of Sulfur Dioxide.

Conclusion

This operation of lettering cemetery memorials shall be subject to the conditions of the attached proposed Registration 097-16651-00441.

Appendix A: Emission Calculations
Abrasive Blasting

Company Name: American Granite
Address City IN Zip: 3502 East New York, Indianapolis, Indiana 46201
Registration: 097-16651-00441
Reviewer: Angelique Oliger
Date: 11-Mar-03

Table 1 - Emission Factors for Abrasives

	Emission Factor	
Abrasive	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
sinterball	137.5
starblast	130

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

	Nozzle Pressure (psig)							
Internal diameter, in	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	**149**	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

	sinterball	**starblast**
Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)		
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =	149	149
D = Density of abrasive (lb/ft3) From Table 2 =	137.5	130
D1 = Density of sand (lb/ft3) =	137.5	130
ID = Actual nozzle internal diameter (in) =	0.19	0.19
ID1 = Nozzle internal diameter (in) from Table 3 =	0.19	0.19
Flow Rate (FR) (lb/hr) =	**149.000**	**149.000** per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =	0.010	0.010
FR = Flow Rate (lb/hr) =	149.000	149.000
w = fraction of time of wet blasting =	100	0 %
N = number of nozzles =	2	1
Uncontrolled Emissions =	**1.49**	**1.49 lb/hr**
	6.53	**6.53 ton/yr**

Total Uncontrolled Emissions= 13.05240 ton/yr

METHODOLOGY

Emission Factors from Stappa Alapco, Section 3 "Abrasive Blasting"
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)
E = EF x FR x (1-w/200) x N
w should be entered in as a whole number (if w is 50%, enter 50)